

of the spines. Now beginning at the bottom of the wound I bite through the upper half of the base of each spinous process, and without removing the forceps use them as a lever in fracturing the process through its base. It is then bent downward. Each process in succession is treated in like manner and its apex introduced into the cleft in the base of the process next below. So much for the bones.

I shall now bring the two lateral sheets of periosteum and muscle over and suture them together in the middle line using chromic gut No. 1 to make a continuous buttonhole suture. We next close the skin with horse hair. Flat sterile dressings. Did you touch the line of suture with iodine, Nurse?

Nurse: "Yes, Dr. Watkins."

Dr. Watkins: "Cover the wound and wash her back off with alcohol. She can go back on her curved stretcher."

How much time did we take?

Dr. Katherine Palmer, anesthetist: "The actual time of operation was twenty-five minutes."

## RECENT ADVANCES IN THE TREATMENT OF DACRYOSTENOSIS.\*

By LOUIS D. GREEN, M. D., San Francisco.

Operative procedures for the relief of dacryocystitis, by making an artificial communication between the tear duct and the nose, date back to the time of Galen and Celsus, but it is only in recent years that any real progress has been made in this direction.

Probing and slitting the duct and canaliculus, while curative in some cases, usually results in failure besides necessitating a painful and prolonged course of treatment. Extirpation of the sac, though more frequently successful, is also undesirable in that it interferes with or destroys the physiological function of the lacrimal apparatus, often failing to abolish the epiphora and therefore frequently demanding a partial or complete removal of the lacrimal gland, and finally is apt to leave a scar in a rather conspicuous place.

Caldwell in 1893, Killian in 1899, and Passow in 1901 attempted to produce free drainage by opening up the duct through the nose but at the expense of the anterior end of the inferior turbinate. While this was a step in the right direction it did not prove entirely satisfactory. This operation not only destroys part of a very important organ, but often fails to reach the seat of trouble, as the stenosis is usually at the junction of the sac and duct, a point higher than that reached by this method.

Toti, in 1894, attempted to obtain the desired end by making a skin incision over the region of the sac and then producing a communication with the nose, but got good results in one half of his cases only.

In 1910, West published a method by which he made an opening from the duct into the nose without sacrificing the anterior end of the inferior turbinate. This likewise has proven unsatisfactory in that the stenosis is usually situated

above this point, and he had to reoperate in about half of his cases. Since then he has entirely discarded this method and now makes the opening directly into the sac. He reports over 100 cases with 90% good results.

Of all the methods so far devised, that described by Bryan and the latest procedure of West, with some slight modifications, are the most rational and have so far proven the most satisfactory. They have the advantage of producing permanent free drainage into the nose above the

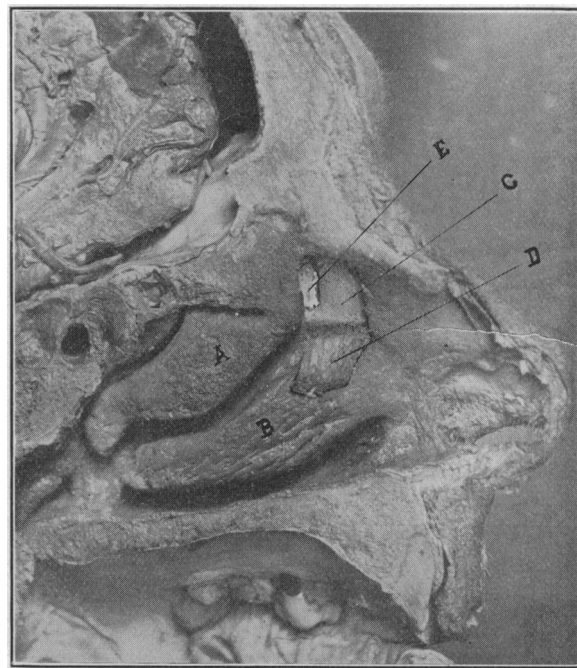


Fig. 1. (A) Middle turbinate. (B) Inferior turbinate. (C) Lateral bony nasal wall. (D) Muco-periosteal flap turned down over inferior turbinate. (E) Lacrimal sac.

point of stenosis and without destroying any important tissues. Epiphora, dacryocystitis, dacryoblenorrhea, phlegmon, and fistula have all been successfully treated in this way.

**Technique**—After making measurements on the living as well as on a large number of cadavers and skulls, the writer finds that the following anatomical landmarks will greatly assist the operator in locating the field of operation. The nasal process of the superior maxillary bone and lacrimal bone form the fossa for the lacrimal sac and a point one quarter inch below the attachment of the middle turbinate to the lateral wall of the nose and on line with its anterior extremity, will about locate the middle of the lacrimal fossa. Just anterior to this is a slight elevation which becomes more conspicuous when the mucous membrane is raised. It is not always marked, though present in most cases.

Under cocain and adrenalin anesthesia the mucous membrane and periosteum of this area are raised in the form of a somewhat quadrilateral flap with its attachment below and turned down over the inferior turbinate. This will expose the bony nasal wall of the lacrimal fossa. With appropriate chisels or burrs the bone is removed till the sac with its membranous

\* Read before the San Francisco County Medical Society. Eye, Ear, Nose and Throat Section, August 26, 1913.

attachments is clearly exposed. This is firmly grasped with forceps and a piece from its nasal wall excised. If pus is present, it will immediately exude through this opening into the nose. Care must be taken that the opening is made large enough as otherwise granulation tissue will form and close it up. Before the mucous membrane is replaced in position, a piece of the flap, at its postero-superior angle is excised so as not to occlude the opening into the sac. The nose is then packed



Fig. II. Lacrimal sac (diagrammatic), dotted line showing part of sac excised.

with gauze which is left in place till the following day when it is removed.

With a lacrimal syringe introduced into the

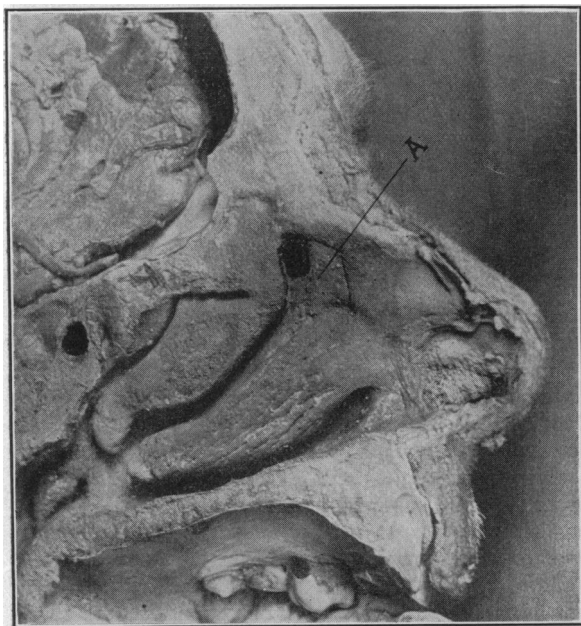


Fig. III. (A) Flap replaced in position with its postero-superior border excised and showing opening into sac.

canaliculus, the sac is irrigated daily until healing is complete when it will be found that a permanent opening exists and the condition cured.

#### LITERATURE

- West: A window resection of the nasal duct in cases of stenosis. Transactions of the American Ophthalmological Society—1910.  
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## SOCIETY REPORT

### BUTTE COUNTY.

The regular monthly meeting of Butte County Medical Society was held Tuesday, December 9th, at 8 p. m. at the office of Dr. Gatchell at Chico. President, Dr. P. L. Hamilton, in chair. Members present: Drs. Baumeister, Browning, Enloe, Hamilton, O. Stansbury, M. P. Stansbury of Hamilton City, E. F. Gatchell of Chico, Dr. Cornell of Stirling City and Dr. Charles Landis of Chico.

The following officers were elected for 1914: Dr. Edward Baumeister, President; Dr. M. P. Stansbury of Hamilton City, Vice-President; Dr. Ella F. Gatchell, Secretary-Treasurer; Dr. O. Stansbury of Chico and Dr. J. H. M. Karsner of Oroville on Board of Censors. Dr. Charles Landis was elected to membership.

The meeting was devoted entirely to business and plans for the ensuing year whereby the interest of the members might be aroused and the meetings made a benefit to all.

ELLA F. GATCHELL, Secretary.

### CALIFORNIA ACADEMY OF MEDICINE.

The regular meeting of the Academy was held in the Library of the San Francisco County Medical Society on the evening of October 27th, when the following program was given:

The Large Personal Factor in Blood Pressure Determinations by the Oscillatory Method. E. S. Kilgore. Discussed by H. W. Gibbons and H. L. Whitney.

At the regular meeting of the Academy, held on November 24, a paper entitled "The Economic Value of a Life" was read by James L. Whitney and discussed by P. K. Brown.

### FRESNO COUNTY.

At the October meeting of the Fresno County Medical Society a very cordial invitation for the Society to meet with the medical profession of Hanford in November was extended by Dr. Charles Rosson, an affiliated member of the Fresno Society. This invitation having been gratefully accepted on the evening of November 4 about fifteen Fresno medicos took automobiles to Hanford, thirty-three miles distant, reaching there about 8 p. m.

The meeting was held at the residence of Dr. Rosson, with enough Hanford physicians present besides the Fresno contingent to total about thirty-five. Several new members were added to the Society, causing Dr. Aiken to remark that he regretted these names were not being enrolled in an active prosperous Kings County Medical Society instead of that of Fresno. This meeting was intended to be largely social, complimentary to the Fresno Society, and was so conducted.

Some very amusing and instructive personal experiences were related, wholesome truths not a few. Dr. Rosson, Sr., of Tulare gave a very interesting account of his early surgical experiences, some of the results of which, would do credit to